

FIG. 1
(PRIOR ART)

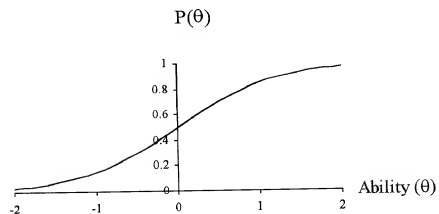


FIG. 2
(PRIOR ART)

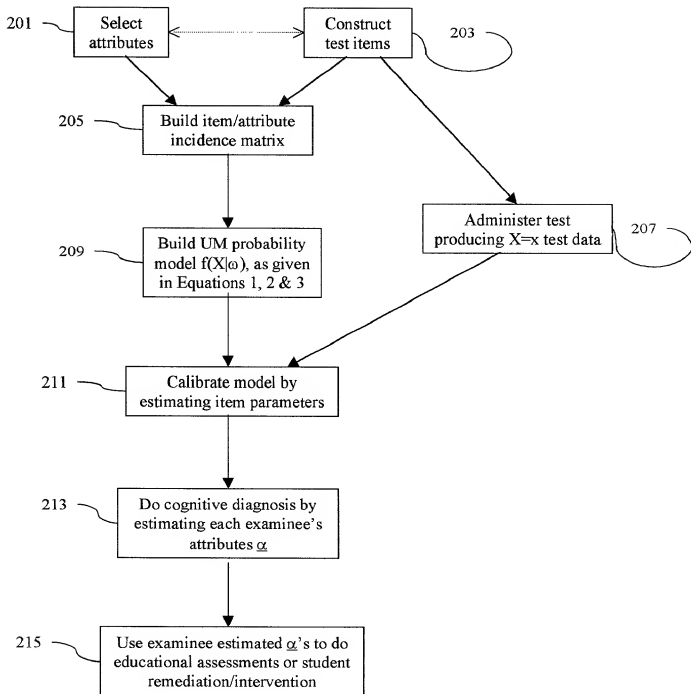


FIG.3
(PRIOR ART)

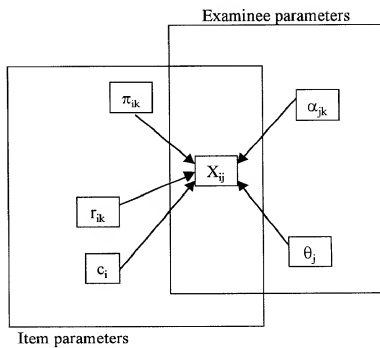


FIG. 4
(PRIOR ART)

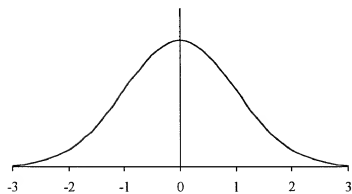


FIG. 4 (PRIOR ART)

FIG. 5
(PRIOR ART)

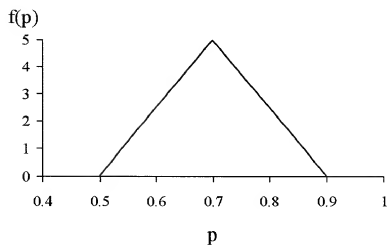


FIG. 6
(PRIOR ART)

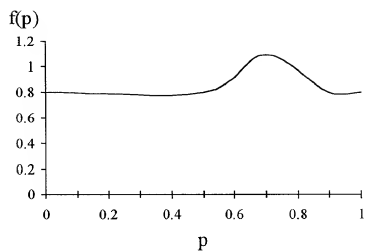


FIG. 7
(PRIOR ART)

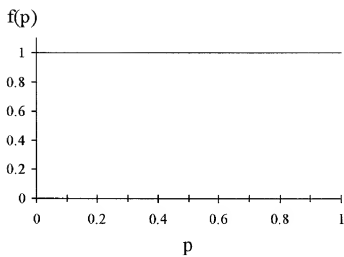


FIG. 8
(PRIOR ART)

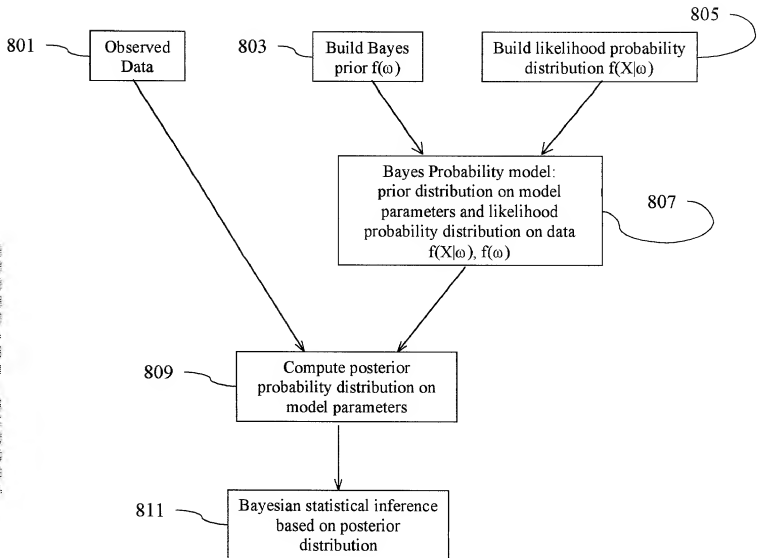


FIG. 9
(PRIOR ART)

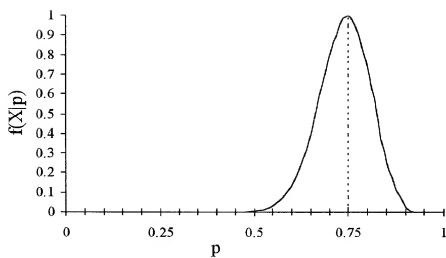


FIG. 10
(PRIOR ART)

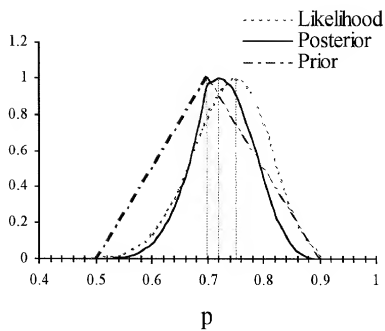


FIG. 11
(PRIOR ART)

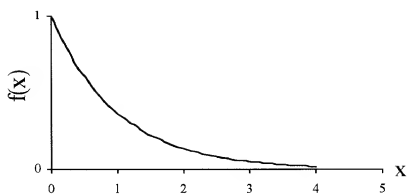


FIG. 12
(PRIOR ART)

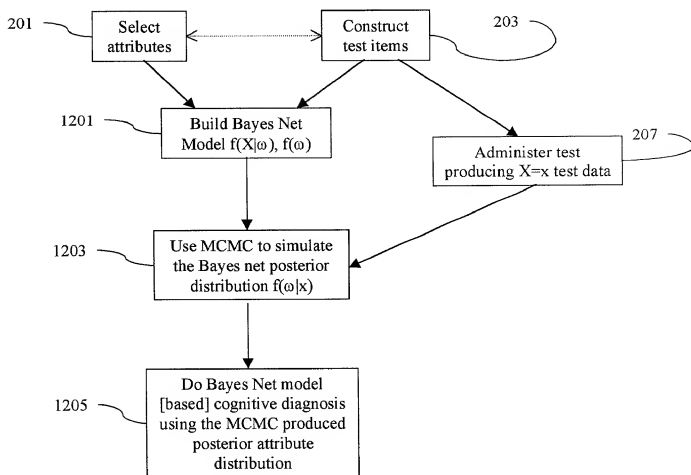


FIG. 13
(PRIOR ART)

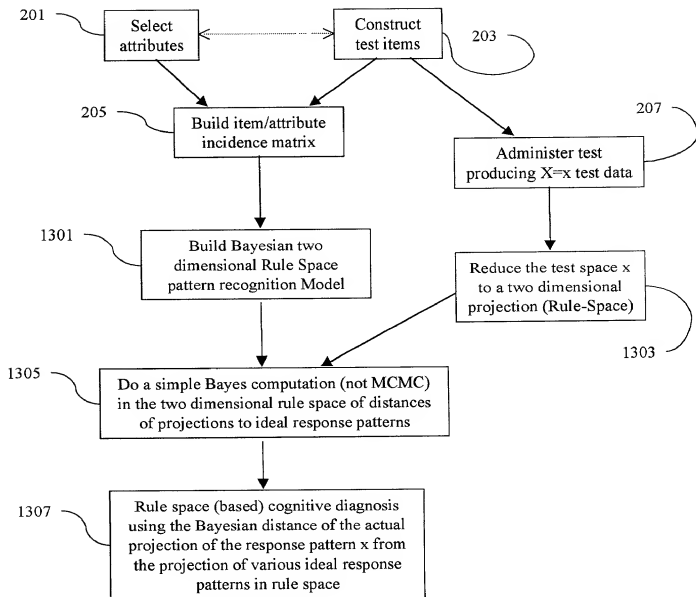


FIG. 14
(PRIOR ART)

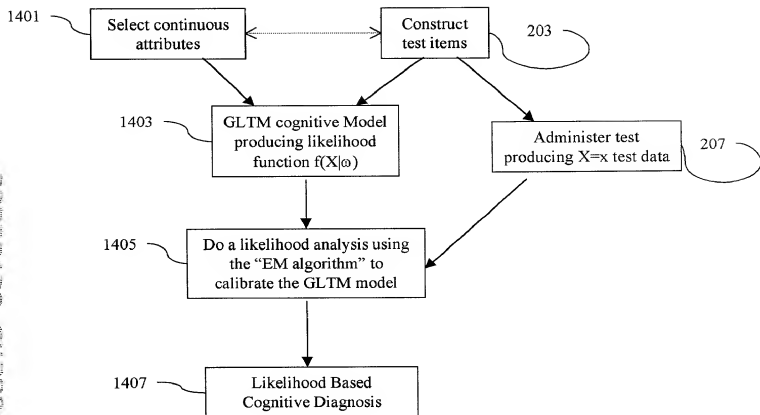


FIG. 15

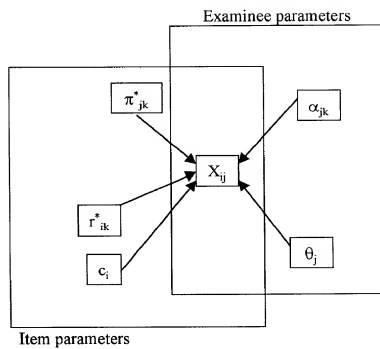


FIG. 16

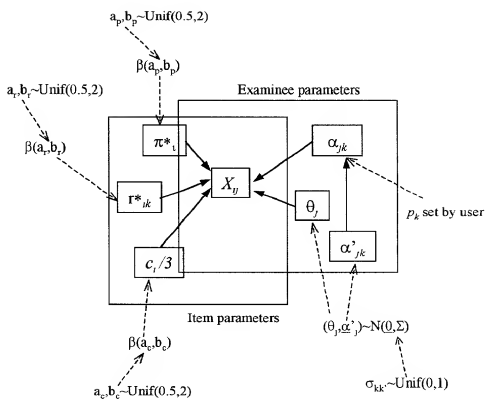


FIG. 17a

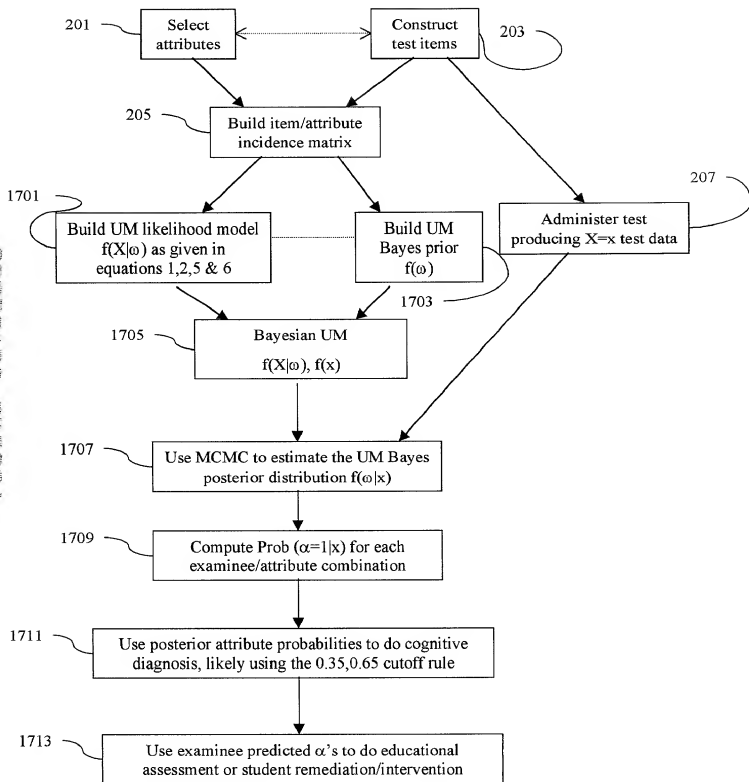


FIG. 17b

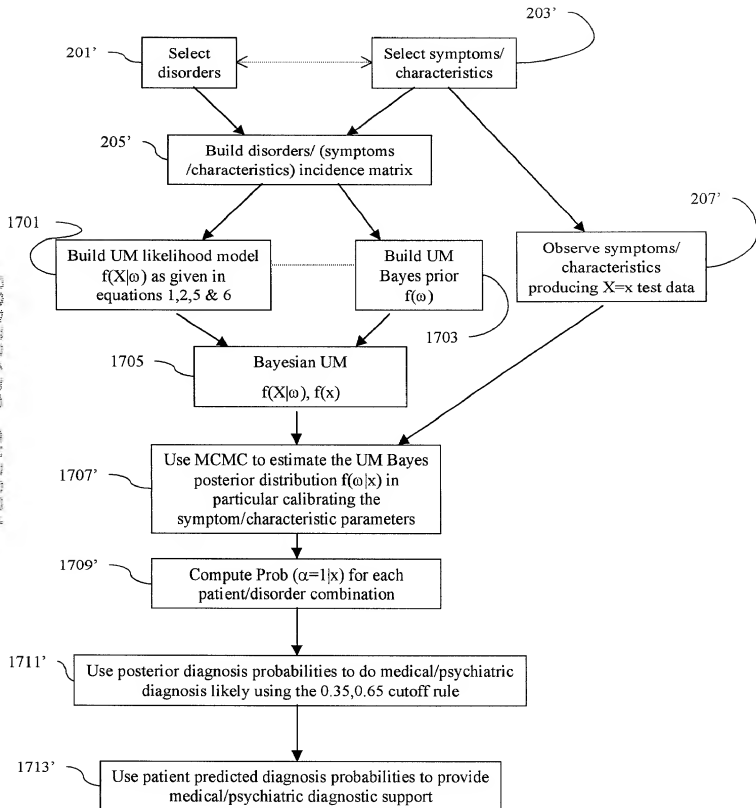
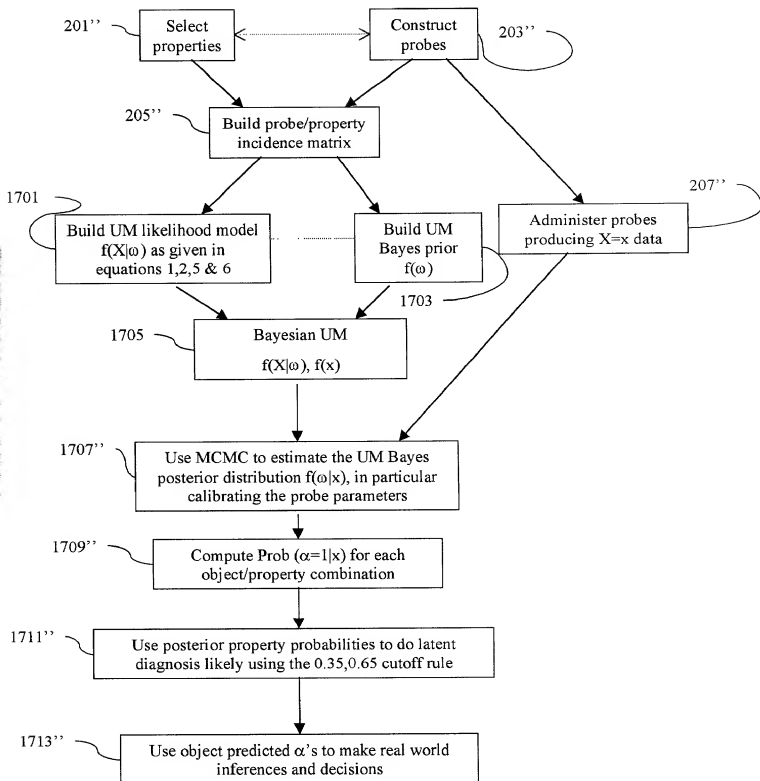


FIG. 17c



[II] Consider the 7 observations: 10, 4, 2, 5, 4, 2, 8.

9. The mean is
(a) 2 (b) 3 (c) 4 (d) 5 (e) 8
10. The standard deviation is
(a) 2 (b) 3 (c) 4 (d) 5 (e) 8
11. The median is
(a) 2 (b) 3 (c) 4 (d) 5 (e) 8
12. The first quartile is
(a) 2 (b) 3 (c) 4 (d) 5 (e) 8
13. The third quartile is
(a) 5 (b) 6.5 (c) 8 (d) 9 (e) 10

[III] The next four questions refer to data sets and their histograms in general.

14. All large data sets have bell-shaped histograms. Is this statement true or false?
(a) True (b) False
15. For large data sets, very close to 50% of the data are smaller than the mean and very close to 50% are greater than the mean.
(a) True for every such large data set
(b) False for some large data sets
16. The median is preferable to the mean as a measure of the center when a data set
(a) is large.
(b) has outliers (unusually large or unusually small values).
(c) is symmetric but is not bell shaped.
(d) has an odd number of points in it.
17. Suppose a large data set has a histogram that is roughly bell-shaped. Suppose that there are no outliers. Then
(a) roughly 68% of the data lies within $\pm s$ of \bar{x} .
(b) exactly 68% of the data lies within $\pm s$ of \bar{x} .
(c) roughly 95% of the data lies within $\pm 3s$ of \bar{x} .
(d) exactly 95% of the data lies within $\pm 3s$ of \bar{x} .
18. The median is preferable to the mean as a measure of the center when a data set
(a) is small.
(b) is symmetric but not bell-shaped.
(c) is strongly skewed to the left.
(d) involves biological or financial data.

FIG. 19

item	Attributes							
	1	2	3	4	5	6	7	8
1	1	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0
4	1	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0
6	1	0	0	0	0	0	0	0
7	1	1	0	0	0	0	0	0
8	1	0	1	0	0	0	0	0
9	0	0	1	0	0	0	0	0
10	0	0	0	1	0	0	0	0
11	0	1	0	0	0	0	0	0
12	0	1	0	0	0	0	0	0
13	0	1	0	0	0	0	0	0
14	1	0	0	0	0	0	0	0
15	0	1	0	0	0	0	0	0
16	0	0	1	0	0	0	0	0
17	1	0	1	1	0	0	0	0
18	0	1	1	0	0	0	0	0
19	0	1	1	0	0	0	0	0
20	1	0	1	0	0	0	0	0
21	1	0	0	1	0	0	0	0
22	1	0	0	1	0	0	0	0
23	0	0	0	0	0	1	0	0
24	0	0	0	0	0	1	0	0
25	0	0	0	0	0	1	0	0
26	0	0	1	0	0	0	0	0
27	0	0	1	0	0	0	0	0
28	0	0	0	1	0	0	0	0
29	0	0	0	1	0	0	0	0
30	0	0	0	0	0	1	0	0
31	0	0	0	0	0	0	1	0
32	0	0	0	0	0	0	1	0
33	0	0	0	0	0	0	1	0
34	0	0	0	0	0	0	1	1
35	0	0	0	0	0	0	1	1
36	0	0	0	0	0	0	1	1
37	0	0	0	0	1	0	0	0
38	0	0	0	0	1	0	0	0
39	0	0	0	0	1	0	0	0
40	0	0	0	0	0	1	0	0
total	13	7	9	6	3	5	6	4